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(54) **NOVEL SMALL ACTIVATING RNA**

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(57) **ABSTRACT**

saRNAs are provided in the present invention. The saRNAs are composed of a first oligonucleotide strand containing 17 to 30 nucleotides and a second oligonucleotide strand containing 17 to 30 nucleotides. Sequences of at least 15 nucleotides in length are complementary in the two oligonucleotide strands, and the unpaired terminal nucleotides form overhangs. The first oligonucleotide strand or the second oligonucleotide strand has more than 75% homology or complementarity with any continuous fragment of 16 to 35 nucleotides in length in the promoter of the target gene. The second oligonucleotide strand has an overhang composed of 1 to 4 nucleotides at 3' end. saRNAs of the present invention can upregulate target gene expression more effectively while reducing off-target effects.

Specification includes a Sequence Listing.

p21 promoter sequence (1 kb)

-1000 gcaggaggca aaagtcctgt gttccaacta tagtcatttc tttgctgcat gatctgagtt

-940 aggtcaccag acttctctga gccccagttt ccccagcagt gtatacgggc tatgtgggga

-880 gtattcagga gacagacaac tcactcgtca aatcctcccc ttcctggcca acaaagctgc

-820 tgcaaccaca gggatttctt ctgttcaggt gagtgtaggg tgtagggaga ttggttcaat

-760 gtccaattct tctgtttccc tggagatcag gttgcccttt tttggtagtc tctccaattc

-700 cctccttccc ggaagcatgt gacaatcaac aactttgtat acttaagttc agtggacctc

-640 aatttcctca tctgtgaaat aaacgggact gaaaaatcat tctggcctca agatgctttg

-580 ttggggtgtc taggtgctcc aggtgcttct gggagaggtg acctagtgag ggatcagtgg

-520 gaatagaggt gatattgtgg ggcttttctg gaaattgcag agaggtgcat cgtttttata

-460 atttatgaat ttttatgtat taatgtcatc ctcctgatct tttcagctgc attgggtaaa

-400 tccttgcctg ccagagtggg tcagcggtga gccagaaagg gggctcattc taacagtgct

-340 gtgtcctcct ggagagtgcc aactcattct ccaaqtaaaa aaagccagat ttgtggctca

-280 cttcgtgggg aaatgtgtcc agcgcaccaa cgcaggcgag ggactggggg aggagggaag

-220 tgccctcctg cagcacgcga ggttccggga ccggctggcc tgctggaact cggccaggct

-160 cagctggctc ggcgctgggc agccaggagc ctgggcccag gggagggcgg tcccgggcgg

-100 cgcggtgggc cgagcgcggg tccgcctcc ttgaggcggg ccccggcggg gcggttgtat

-40 atcagggccg cgctgagctg cgccagctga ggtgtgagca gct